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ORIGINAL

South Carolina Electric & Gas Company
 CONTRACT FOR ELECTRIC SERVICE

Effective Date: 01-16-2018 Contract No. E0218001

THE PARTIES HEREIN NAMED AGREE TO THE FOLLOWING

Customer's Legal Name: Trane U.S. Inc.
 D/B/A: Trane PO 30001067
 Premises Served: Killian Road/I-77 Facility
 Service Address: 400 Killian Road, Columbia, SC 29203-9751
 Billing Address: C/O Ingersoll-Rand, Trane U.S. Inc., PO Box 847, Mandan, ND 58554-0847
 Initial Term Ends: 10 Years from Effective Date; Service Date: See Expansion in Service Date
 Minimum Notice of Termination: 12 Months after initial term.
 Supply: 115 kV Service Method: Company owned customer substation
 Delivery: 13.8/7.96 Volts, 3 Phase, 4 Wire, Wye Connected
 Point of Service: Load side terminal of the transformer low side disconnect switch
 Metered Voltage: 13.8/7.96 Volts; Meter Location: Inside customer substation
 Billing Rate: 23 Contract Demand: 3,800 kW Dedicated Capacity: 7,500 kVA
 Build-up Period: 6 months on expansion load SIC: 3585 NAICS: 333415
 Special Provisions/Extra Facilities/Explanations: See attached Exhibit "A", which is incorporated herein by reference.

This contract incorporates all general, standard, and special terms hereafter or incorporated by reference, and supersedes all prior and contemporaneous understandings, agreements, representations and warranties, both written and oral, with respect to the same services.

TRANE U.S. INC.

SOUTH CAROLINA ELECTRIC & GAS COMPANY

Designated by:
 By: Doug Dickinson
 DEMEDOCCEP007...
 Print: Doug Dickinson
 Title: VP of ISC, Trane Commercial

Designated by:
 By: William G. Watkins
 0218000070403...
 Print: William G. Watkins
 Title: Manager - Large Customer Accounts & Services

CLP# E0218001
 PGV8

PUBLIC VERSION

EXHIBIT "A"

Contract for Electric Service between SCE&G and Trane U.S. Inc.
400 Killian Road, Columbia, SC 29203-9751

I. GENERAL

This Contract for Electric Service ("Contract") is being executed between South Carolina Electric & Gas Company ("Company" or "SCE&G") and Trane U.S. Inc. ("Customer") for and on behalf of themselves, their successors and assigns, and supersedes the Contract for Electric Service (Contract #E0302021) dated March 1, 2003 with First Amendment dated July 14, 2011, and all prior and contemporaneous understandings, agreements, representations and warranties, both written and oral, with respect to the same services.

II. SPECIAL CONDITIONS

Customer has plans to expand its operations at this facility. Customer has announced plans to make an investment of approximately \$93,000,000 for its expansion resulting in the addition of 700 jobs. The expansion is expected to be completed in 2022.

1. Expansion Load Contract Rate: Customer will be billed for all service in accordance with Company's Industrial Power Service Rate 23 (IPS) in effect at the time of billing, with the exception of the Expansion Load which will be billed as described below.

Beginning with the Customer's first bill issued following the Expansion In-Service Date and extending for a period of six (6) consecutive twelve (12) month periods, the Customer's Expansion Load will be billed according to a Contract Rate, (the "Contract Rate") consisting of: 1) a Demand Charge; 2) an Energy Charge; and 3) an Economic Development Incentive Credit (EDI Credit), as follows:

- 1) Demand Charge: The Customer's Demand Charge shall be the Demand Charge in the Company's IPS Rate 23, in effect at the time of billing, applied to Billing Demand kW as determined by the Company.
- 2) Energy Charge: The Customer's Energy Charge shall be determined by applying the Energy Charge per kWh in the Company's IPS Rate 23, in effect at the time of billing, to the billing kWh as measured by the Company.
- 3) Economic Development Incentive Credit: The Customer's monthly Economic Development Incentive Credit (EDI Credits) shall be determined by applying the Credit Percentages shown below to the sum of the Demand Charge and the Energy Charge described above excluding specifically identified Rate Components which are identified as Riders or Adjustments which currently are in effect or which may be added in the future. The specifically identified Rate Components currently and/or scheduled to be in effect include: (1) Adjustment for Fuel and Variable Environmental Costs; (2) Demand Side Management Component; (3) Pension Costs Component; (4) Storm Damage Component and (5) Distributed Energy Resource Program.

Approval Initials

For Customer

For Company

PUBLIC VERSION

Contract Year Economic Development Incentive Credit



At the conclusion of six (6) years of receiving Economic Development Incentive Credits under this Amendment, billing for all service under this Contract shall be in accordance with the Company's Industrial Power Service Rate 23, in effect at the time of billing.

2. **Expansion Load:** Beginning with the expansion, the Expansion Load will be established as the net monthly peak kW demand and kWh consumption which exceeds the historical Baseline kW demand and kWh consumption for the twelve (12) billing months which immediately precede the beginning of the expansion. The historical Baseline kW demand and kWh consumption will be included on Attachment A below. The six (6) month build up period shall apply to the expansion load.

The increase in the net kW demand over the Baseline Load and the net kWh over the Baseline consumption shall be billed incorporating the EDI Credits as prescribed above.

3. **Expansion In Service Date:** The date specified by Customer when the expansion is completed and billing is to commence under the provisions of the Expansion Load Contract Rate described above. Customer agrees to provide Company thirty (30) days notice of when billing is to commence under these provisions.

4. **Relocation of Existing Substation and Contributions-in-Aid-of-Construction:** Customer has requested and Company has agreed to remove Company's existing 10.5 MVA substation and construct a new 10.5 MVA substation to accommodate Customer's new construction and site access. The new substation would provide standard electric service consisting of a single 115 kV to 13.8 kV transformer appropriately sized at 10.5 MVA and provide space for a future distribution transformer to be located within the Customer Substation operated and maintained by Company. Company estimates the cost to build a new 10.5 MVA substation is [REDACTED] and Customer has agreed to pay the Company a one-time, non-refundable contribution-in-aid-of-construction (CIAC) of [REDACTED] of the total cost in the amount of [REDACTED]. The balance of estimated relocation cost will be borne by the Company in exchange for allowing the Company to install, operate and maintain a distribution transformer in the relocated substation as well as recognition of the addition of new load by the Customer.

The parties agree that Company shall bill Customer [REDACTED] CIAC amount referenced above per schedule below:

- a. January 15, 2018 [REDACTED]
- b. April 15, 2018 [REDACTED] and
- c. July 31, 2018 [REDACTED]

Approval Initials

DS
DD

For Customer

DS
WGW

For Company

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Upon reasonable period following completion of new substation and removal of the existing substation, Company will determine the actual cost of the project and Customer's contribution will then be adjusted to [REDACTED] of the actual cost. In no case shall Customer contribution exceed [REDACTED] of the [REDACTED] Company will bill or credit Customer for the difference between estimated and actual cost.

Attachment B contains Company's Customer Substation Guidelines. These guidelines outline requirements and responsibilities for both the Customer and Company for the design, construction, operation and maintenance for the new substation.

Customer shall furnish, free of charge, an adequate piece of property for the substation, an access road to the substation, and/or other facilities as required for the substation as well as access for its conductors coming into the substation. Customer also agrees to grant Company the right of way for its distribution line to enter the substation and connect with the distribution transformer indicated above. Attachment C contains Company's planned routing for which when finalized Customer agrees to provide an easement. Once the proposed site passes Phase 1 environmental assessment, wetland determination, and title search performed by Company, Customer hereby agrees to sign an easement for the substation. In addition, Customer shall perform all clearing and grading required on the site as set forth in the Customer Substation Guidelines (Attachment B). Once the site is approved as compliant with Company specifications, Company will commence construction which will require twelve (12) months to complete once sufficient right of way has been acquired. See Attachment D for estimated construction schedule. These dates are contingent upon this contract being signed no later than 12/31/17. Should contract be signed after this date, the milestone dates in Attachment D shall be adjusted accordingly.

Company will remove its poles, structures, transformers, switches and other components from the existing substation ("Removed Facilities"). Company will not be required to remove the ground grid, concrete foundations, aggregate, fencing and similar components to be removed by Customer. Upon Company's completion of the Removed Facilities, Company shall release the easement for the existing substation site and relinquish all rights thereto back to the Customer.

5. **Early Termination Charges:** Should this Contract be terminated for any reason prior to the conclusion of the Initial Term, the Company shall bill and the Customer shall pay, within thirty days of the invoice date, a percentage of all EDI Credits applied by the Company to the Customer's invoices under this Contract according to the following schedule:

<u>Contract Year</u>	<u>% of Total Received EDI Credits</u>
Year 1	100 %
Year 2	80 %
Year 3	60 %
Year 4	40 %
Year 5	20 %
Year 6	10 %

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The Early Termination Charges described in this Section are in addition to any and all other termination charges provided for in this Contract, including but not limited to: the facilities termination charge described in the Standard Conditions and the demand termination charge described in the Standard Conditions.

6. **Full Requirements Service:** In consideration for the aforementioned Economic Development Incentives, this Contract shall be for full-requirements service which requires that all energy and capacity be purchased from the Company except for Customer-owned power generation for emergency use by Customer as backup for its critical infrastructure and/or the installation and operation of a battery storage system. In the event of non-compliance by the Customer, Customer agrees to pay to Company an amount equal to the sum of all Economic Development Incentive Credits applied by the Company to the Customer's invoices under the Contract. This section does not preclude Customer from participating in any of the Company's programs including its customer applicable Distributed Energy Resource (DER) or Standby Generator programs.

7. **Regulatory Approval:** The Customer agrees to support the Company in its request to the Public Service Commission of South Carolina ("Commission") to protect the confidential information contained within this Contract. This Contract is subject to the approval of the Commission, and any and all provisions herein are subject to change by order(s) of the Commission and the Customer agrees to support the Company in its request to the Commission seeking approval of the Contract.

8. **Confidentiality:** Customer requests and Company hereby agrees to keep the terms of this Contract confidential. Neither party shall disclose directly or indirectly without the prior written consent of the other party the terms of this Contract to a third party except (i) in order to comply with any applicable law, order, regulation, or exchange rule; (ii) to the extent necessary for the enforcement of this Contract; or (iii) to its employees, leaders, counsel, accountants and other agents on a need-to-know basis for the analysis of business issues related to this Contract, provided such persons shall have agreed to keep such terms confidential. The existence of this Contract is not confidential.

Approval Initials  
 For Customer For Company

PUBLIC VERSION**STANDARD CONDITIONS**

Supply and Use: Company agrees to sell and Customer agrees to buy from Company all purchased electric energy, capacity, related transmission services and any related distribution services required by Customer for use on its premises covered hereunder. Resale by Customer of energy, capacity, related transmission or related distribution services is not permitted.

Creditworthiness: Company, in order to satisfy itself of the ability of the Customer to meet its obligations under the contract may conduct periodic reasonable credit reviews in accordance with standard commercial practices. Customer agrees to assist in these reviews by providing financial information and at the request of the Company, will maintain such credit support or surety including but not limited to, an unconditional and irrevocable letter of credit to provide adequate security for protection against the risk of nonpayment.

Service Application, Deposit and Release: Prior to receiving service, Customer or its Agent must: (a) Ensure that an application for service is made to Company, either in person at one of Company's commercial offices or through the Company representative coordinating the service arrangements; (b) Post a service deposit with Company (as determined by Company in accordance with S.C. Public Service Commission regulations), unless waived by Company in favor of other satisfactory assurance for payment of bills; and (c) Ensure that any inspections required by governmental authorities having jurisdiction are completed and notice thereof is given to the Company.

Commencement of New Service: Company and Customer shall make every reasonable effort to have their respective facilities ready for service by the Service Date stated on Page 1. If conditions should change, the affected party shall immediately notify the other.

Assignment: Neither Party shall assign this Agreement or its rights hereunder without the prior written consent of the other Party, which consent may be withheld in the exercise of its sole discretion.

Term: This Contract shall commence on the Effective Date (the date on which this contract is fully executed) and shall continue for the full Initial Term, unless an early termination is mutually agreed upon. Thereafter, it will extend automatically until terminated by either party giving the other a written Minimum Termination Notice. Billing for service rendered hereunder shall commence on the Service Date (the date customer contracts for service under the tariff applicable to this contract) or the date that service is first made available, whichever is later, or in accordance with terms stated under Special Provisions.

Termination: Should Customer terminate this contract and disconnect service for any reason, either during the initial term or any extension thereof unless waived as provided for herein, Customer shall pay to the Company a facilities termination charge equal to (a) the total installed cost of facilities dedicated solely for serving Customer, (b) less any Customer contribution to construction, (c) less accumulated depreciation of the facilities funded by Company, (d) less salvage value of all facilities dedicated solely for serving Customer, (e) plus the cost of removal (including any associated environmental investigation/remediation costs related to a spill or release of hazardous substances caused by Customer or those paid or incurred by the Company which were not the result of negligence on the part of the Company), all as determined by Company in accordance with its standard accounting practices; provided, however, that the termination charge shall not be less than zero. Customers who terminate prior to the expiration of the initial term or any extension thereof may also be required to pay to Company a demand termination charge equal to 90% of the maximum demand set during the term times the demand rate in effect at the time of termination times the number of months remaining in the contract period.

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Company may waive a portion or all of the termination charges where (1) a successor contract is executed prior to termination of this Contract, or (2) Customer is able to furnish Company with satisfactory evidence that a successor customer will occupy the premises within a reasonable time and contract for substantially the same service facilities. If deregulation should occur during the term of this contract, the above demand termination charge, after deregulation, will be determined by appropriate governing authority(ies) rules at that time. The termination charges above shall not preclude additional termination charges approved by the SCPSC or imposed by law.

Impaired Service: Customer shall be responsible for installing and maintaining on its system such protective equipment as necessary for protecting its equipment from single phase conditions, momentary interruptions or voltage fluctuations arising from conditions on its system or from Company's supply lines. Customer shall not operate its equipment of such nature and in such manner as to impose voltage flicker, surges, or harmonics on Company's system that adversely affects the Company's system or its service to other Customers. Adverse conditions verifiable as of Customer origin shall be corrected promptly by Customer or upon Notice Company may discontinue service until the conditions are corrected. Customer agrees to keep Company equipment unencumbered and accessible at all times.

Load Increase: If Customer contemplates a load increase which may exceed the **Maximum Capacity** stated on Page 1, Customer shall give Company written notice of planned increase, with sufficient lead time for Company to enlarge its facilities. In such cases this Contract may be amended by mutual consent of the parties to reflect any changes in the service characteristics, applicable charges or conditions of service.

Facility Relocation: Should Customer request Company to relocate any of its facilities, or take any action which will require Company to relocate its facilities, Customer shall reimburse Company for the costs incurred.

Hold Harmless: Company and Customer do respectively assume full responsibility for the maintenance and operation of the facilities owned and/or operated by each, and each shall indemnify and except as hereafter limited, shall hold the other harmless from any loss resulting from bodily injury (including death) or damage of property arising directly or indirectly out of any negligent or willful act or failure to act on the indemnitor's part in the installation, maintenance, operation, replacement and/or removal of the facilities owned and operated by each. Neither party shall be liable to the other in any event, whether in contract, tort or otherwise, for any loss of revenue, profits, use of production, costs of capital or purchased or replacement power, interest, business interruption, claims of customers or any other incidental, indirect or consequential damages of any nature whatsoever. Customer(s) acknowledge(s) the presence of overhead and/or underground power lines and understands that contact with them could cause serious injury or death.

South Carolina Public Service Commission: This Contract, the Billing Rate referenced on Page 1, and all services rendered hereunder, are subject to the Company's "General Terms and Conditions" as approved by the Commission, and to the "Rules and Regulations" of the Commission, as the foregoing now exist or may be amended in the manner prescribed by law. The billing Rate and General Terms and Conditions are attached and made a part hereof; Rules and Regulations are made a part by reference and are available upon request. This contract is specifically intended to survive deregulation or retail access.

Bold Print Terms: Bold Print terms reference the corresponding completed blanks on Page 1.

Approval Initials DD WGW
 For Customer For Company

PUBLIC VERSION

ATTACHMENT A

Peak Demand Preceding Expansion Load: The Expansion Load will be determined as the amount by which the monthly peak kW demand and energy exceed the monthly peak kW demand and energy for the 12 month period immediately preceding the Expansion In-Service Date.

The monthly peak demands and energy for the 12 month period immediately preceding the Expansion In-Service Date of _____ were as follows:

January	_____ kW	_____ kWh
February	_____ kW	_____ kWh
March	_____ kW	_____ kWh
April	_____ kW	_____ kWh
May	_____ kW	_____ kWh
June	_____ kW	_____ kWh
July	_____ kW	_____ kWh
August	_____ kW	_____ kWh
September	_____ kW	_____ kWh
October	_____ kW	_____ kWh
November	_____ kW	_____ kWh
December	_____ kW	_____ kWh

Receipt of this completed Attachment A is acknowledged by Customer:

Trane U.S. Inc.

By: _____

Print Name: _____

Its: _____

Date: _____



Customer Substation Guidelines

Substation Design Manual Section 24.1

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Revision History

Revision	Date	Comments
0	April 20, 2006	Initial Development by DL based on existing guideline and several other sources
1	March 28, 2007	Added Section 6.8 for metering phone line.
2	August 16, 2007	Added Section 8.13 for resistor bushings.
3	October 22, 2007	Edited Section 6.4 to make customer's termination structure 10' outside fence.
4	March 23, 2009	Inserted new Section 7.1
5	November 24, 2009	Edited Section 6.4 from 10' to 3' outside fence. Made grounding edits.
6	March 19, 2010	Removed Section 6.8. Use BlueTree Communications.
7	June 04, 2010	Changed from 3' to 10' on sections 6.2 and 6.4.
8	April 13, 2012	Changed Sections 3.3, 3.6, 3.8 & 4.1 as suggested by Cory Touard & Brian Peeler
9	January 24, 2013	Changed Section 7.3 as suggested by Travis Gregg for non-conductive Str.
10	January 29, 2013	Revised Section 3.3 about fill material. Revised Section 3.8 about NAVD88.
11	February 25, 2013	Added dwg CUST-POA. Modified Section 6.1
12	June 03, 2014	Added "substation neutral" to section 7.4
13	May, 7, 2015	Changed Section 3.3 by adding 10' graded area outside fence and added slope ratios. Added 6% road grade in Section 3.9.
14	November 18, 2016	Changed various articles in Section 3 for more details on access road, surface level 2 feet



Customer Substation Guidelines

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		above base flood elevation, and clearing 10' beyond fence.
15	May 3, 2017	Added "unless there is a neutral resistor (See Section 8)" to Section 6.3. Also added customer's switchgear "and grounding" to Section 6.3. Updated Customer's Point of Attachment Sketch on last page.

Authored By: Don D. Lowman

Date: April 20, 2006



Customer Substation Guidelines

Substation Design Manual Section 24.1

1.0 Purpose

The purpose of these guidelines is to set-forth South Carolina Electric & Gas Company Policy in regard to sites for customer electric substations, access road to substation and routing of Transmission lines on customer property. These guidelines also address substation interfaces with the customer and items the customers need to furnish for the substation. These guidelines are to be followed in negotiations with the customer, in the design, and in providing for the construction, operation and maintenance of such substations

2.0 References

2.1 Previous Customer Substation Guidelines

2.2 Old Engineering Design Manual

3.0 Substation Site Requirements

- 3.1 The customer shall furnish, free of charge, an adequate piece of property for the substation, an access road to the substation, and/or other facilities as required. Easements will be required, drawn up in similar fashion to a property plat, showing the location of the substation as well as that portion of the customer property required for the access road and the transmission line(s)..
- 3.2 The size of the station shall be the minimum required to meet electrical clearances while providing safe working space for SCE&G personnel. The size and location should also take into account any zoning, code, ordinances, environmental, restrictive covenants, etc. The access road will provide necessary access for construction, operation and maintenance. SCE&G will provide the dimensions of the property required for the substation and access



Customer Substation Guidelines

Substation Design Manual Section 24.1

road. The substation site and access road location will be mutually agreed upon by customer and SCE&G..

- 3.3** The customer shall perform all clearing and grading required of the site and access road. Any stormwater construction and/or land disturbance permits (to include installation, maintenance, and inspection of controls) will be the responsibility of the customer and shall include the complete period of substation construction. A bearing capacity of 2000PSF is required. The customer shall be required to furnish certified documentation from a Registered Engineer as to the bearing capacity of the soil. In the event that 2000PSF is not possible due to poor or wet soil, the customer will be required to furnish pilings for foundations, which support substation equipment. Material used for fill shall be free from clay balls, roots, organic material and stripped material. If needed, import fill material shall be reasonably well graded from coarse to fine and containing sufficient fines for compaction. All sources of import fill material shall be submitted to SCE&G Corporate Environmental Services for approval. The graded level area shall extend 10 feet outside the proposed substation fence. Outside the graded level area, the maximum slope ratio for cut and fill shall not exceed 1 foot vertical to 3 feet horizontal.
- 3.4** The site must be well drained and should have a slope of approximately 0.5% from its centerline to the edge of the site or as directed by SCE&G. Runoff water from areas around the site should not drain through or under the substation area.
- 3.5** It shall be the customer's responsibility to assure that the substation area and access road is free of any pipes, cables, ducts, drainage ditches, or structures, either overhead or underground. The substation site shall not be located in close proximity to large quantities of flammable liquids, in a blasting area, or in an area with a high concentration of airborne materials.



Customer Substation Guidelines

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- 3.6** The substation site shall not contain any hazardous materials nor shall it have a history of environmental contamination, including petroleum products, that could increase the risk or hazard to human health, property, or the environment, either on the surface or below surface. The site shall not have historically been a solid waste landfill. Any materials known to exist below grade other than naturally occurring soils shall be made known to SCE&G, as soon as a site is identified. If the customer cannot demonstrate to SCE&G that the site is clean, then SCE&G may, at its option, install wells and/or borings to test water quality or soil characteristics. The customer shall reimburse SCE&G for the costs to install wells and/or borings to test water quality or soil characteristics. In the event that hazardous materials or contamination are discovered, the customer shall provide another site or have the contaminated site cleaned at his expense. SCE&G may conduct a review of documentation regarding the historical use of the selected site in order to determine if baseline or background sampling is required. The customer shall reimburse any environmental sampling and related laboratory analysis to SCE&G. SCE&G may, at its option, accept the site if all hazardous materials are made known or a suitable baseline is established and the amount of any contamination is less than acceptable levels as determined by SCE&G.
- 3.7** The customer shall be responsible for determining if the substation site falls in a designated wetland area or contains an archaeological site. If the substation site should fall in one of these categories, the customer shall provide another site, or obtain the necessary permits required for site preparation.
- 3.8** The site shall not be located in a floodway or floodplain. Minimum surface elevation shall be 2 feet above Base Flood Elevations based on the current FEMA Flood Maps.



Customer Substation Guidelines

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- 3.9** The customer shall provide an access road into the substation. The road shall be capable of supporting heavy truck equipment. Maximum slope of the road shall not exceed 8 percent, or 6 percent for large 230kV transformers. The access road shall not contain sharp bends, which would restrict access by large equipment. The location of the access road will be mutually agreed upon by customer and SCE&G.
- 3.10** The customer will furnish to SCE&G, as soon as possible, a copy of the site layout, wetlands delineation, sediment and erosion control drawings, and other associated drawings indicating the exact location of the substation. Adequate reference points, such as property corners and property lines shall be shown locating the substation.
- 3.11** SCE&G will furnish gravel inside the substation. SCE&G will also furnish gravel outside the substation for a distance of 5 feet from the fence. SCE&G will furnish a security fence around the substation.
- 3.12** SCE&G will provide the dimensions of the substation fence. The customer shall leave a ten-foot border outside the perimeter of the fence before any side slope begins. The ten-foot area outside the fence shall be cleared and kept clear of vines and small growth. Natural vegetation and undergrowth will not be cleared from the remaining border.
- 3.13** The customer will be responsible for the disposal of any excess soil removed from the substation during clearing and grading or subsequent digging for foundations and other structures.

4.0 Transmission Line R/W Requirements

- 4.1** Unencumbered R/W and access shall be provided for the transmission line/s entering the station. Transmission Engineering shall determine the area required. Once the transmission line has been installed, filling shall not raise



Customer Substation Guidelines

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the area under the line. Minimum ground clearances must be maintained. SCE&G must approve any use of the transmission R/W, such as parking, prior to use. Construction cranes or other tall equipment shall be restricted from operating within 20 feet of the transmission line/s.

- 4.2** The customer shall be responsible for determining if the transmission route over their property contains designated wetlands or an archaeological site. If the transmission access falls in one of these categories, the customer shall provide another site, or obtain the necessary permits required for site preparation. If an archaeological site does exist and SCE&G must traverse this area to complete work, customer will be responsible for cost incurred by Company to meet customer's demand that Company uses that particular R/W. Customer shall provide a drawing with wetlands delineation for any R/W containing wetlands.

5.0 Easements

- 5.1** SCE&G will furnish to the customer a drawing indicating the location and width of all necessary rights-of-way. The customer shall have this information added to their site layout and furnish one copy of the layout to SCE&G for their reference and coordination in the construction of the substation and lines.
- 5.2** Transmission Engineering and Substation Engineering will have the necessary drawings prepared and forwarded to the Right-Of-Way Department for them to obtain appropriate easements.

6.0 Substation Customer Interfaces

- 6.1** The point of service connection for the customer is a NEMA drilled two hole (for 600 amp service) or four hole (for 1200 amp service and above) switch



Customer Substation Guidelines

Substation Design Manual Section 24.1

pad. The switch pad may be made of copper or aluminum material. The switch pad is located inside the SCE&G substation. Its exact location will be shown on an SCE&G General Plan and Elevations drawing which will be given to the customer when the construction drawings are issued. No strain can be placed on the point of connection. Customer to furnish necessary connectors and conductors to make attachment to the point of connection. See Attached Sketch CUST-POA for further details.

- 6.2 Customer's equipment, other than the overhead conductor to the point of connection, shall be located ten (10) feet outside the substation fence and easement. Any variation is an exception which must be approved by SCE&G Engineering.
- 6.3 The main power transformer is generally connected in grounded wye. An overhead 3' foot pigtail neutral conductor will be provided to the customer, unless there is a neutral resistor (See Section 8). The customer must extend and terminate this conductor at the customer's switchgear and grounding, even if the customer has no loads connected from phase to neutral. This will provide a path for neutral current to flow back to the transformer in the case of a line-to-ground short circuit on the customer's system. The current flow through this neutral conductor path minimizes the possibility of the existence of dangerous step potential voltages.
- 6.4 When the primary conductor to the customer's facilities is to be underground cable, the cable termination structure is to be furnished by the customer and located ten (10) feet outside the substation fence, with connection to the substation point of connection being made by means of overhead conductor as described in section 6.1.
- 6.5 The customer shall ensure that access to all substation gates is kept clear, and that no material is dumped or stored against the fence. The customer shall take whatever steps are necessary to prevent damage to the fence caused by vehicles, personnel, materials, or corrosive chemicals. In the event that



Customer Substation Guidelines

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damage to the fence does occur, the SCE&G Substation Construction & Maintenance Department shall be notified immediately. In such cases, the customer should ensure that: (1) the security of the substation is not jeopardized as a result of the damaged fence, and (2) unauthorized persons do not enter the substation.

- 6.6** The customer shall be responsible for providing and maintaining any substation screen required by local ordinances. Any screening placed on SCE&G easements must be coordinated with the SCE&G Engineering Department.
- 6.7** In the case that control wiring, metering pulse wiring, or CT secondary leads must be run between the SCE&G substation and the customer's facilities, a weatherproof enclosure ("Customer Interface Box") will be mounted outside the substation fence. Alternately, the interface wiring may be connected to a special interface panel located in the SCE&G Relay House. In this case conduit from the relay house to the fence line will be provided by SCE&G. Conduit from the substation fence line to the customer facilities will be the responsibility of the customer. The point of connection for all such leads will be on sliding link type terminal blocks located in the Customer Interface Box or on the interface panel located in the relay house. Whenever such interconnections are required between the SCE&G substation and the customer's facilities, the customer's ground system must be connected to the substation ground system to prevent transferred voltage potentials as described in the Grounding section below. Reference Section 7.1 for grounding requirements.

7.0 Grounding

- 7.1** South Carolina Electric and Gas Company (SCE&G) must consider the safety of its employees and anyone else that may be working near or in contact with



Customer Substation Guidelines

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its facilities. An adequately designed substation grounding grid is an important safety component of the electric system as it protects individuals from the potentially hazardous touch and step voltages that may occur during an electrical fault. When a customer connects to a SCE&G ground grid through any metallic interconnection including fencing, conduits, etc., the customer's facility and its equipment may be subjected to potentially unsafe voltages transferred through those connections. It is also possible that these potentially unsafe voltages could occur on metallic buildings, fences, equipment, etc. in close proximity to SCE&G's fence even if the grounding systems are not connected.

- 7.1.1 SCE&G does not evaluate the customer's ground grid, the adequacy of which directly impacts the potential for unsafe step and touch voltages on customer's equipment, buildings, or their electrical systems. This must be evaluated by the customer. Industrial customers should have a ground grid evaluation performed by an engineering firm experienced in grounding evaluations to insure any touch, step, or transfer of voltage potentials are mitigated appropriately. The customer should insure the grounding contractor is knowledgeable with respect to power system grounding evaluations associated with utility systems as well as industrial facilities.
- 7.1.2 SCE&G and its grounding contractors utilize the Safe Engineering Services CDEGS grounding evaluation computer modeling software. In an attempt to assist the customer with their study, where available, SCE&G will provide access to the grounding resistivity measurements, grid and fault data, and any existing documentation and module input for the grounding program for use by the customer's grounding contractor. SCE&G will provide, upon request, contact information for engineering firm/firms that



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have performed grounding studies for SCE&G. Any information released by SCE&G regarding its electrical system must be treated as confidential information as required by the Federal Energy Regulatory Commission and the U.S. Department of Homeland Security. As such, the grounding contractor and customer will be required to sign SCE&G's standard non-disclosure agreement prior to release of such information.

- 7.2 SCE&G will install a ground system, usually a grid of copper conductors buried beneath and adjacent to the fenced enclosure of sufficient size, capacity and conductance to adequately dissipate expected fault currents. It will be designed to maintain step and touch potentials at safe levels in the substation area under fault conditions.
- 7.3 The substation fence will be bonded to the ground grid. A portion of the grid will be buried 3 feet outside the fence as part of the step and touch potential protection. Conventional, customer steel structures are not permitted within 10' of the substation fence. When a structure is needed within this 10' requirement, SCE&G recommends non-conductive materials. This will mitigate touch potential issues between a customer structure and the SCE&G fence. The customer shall notify SCE&G Substation Engineering Department with any exceptions to this requirement. The ground grid design includes gate areas which is 13 feet outside the fence assuming each gate leaf is 10 feet long.
- 7.4 To avoid possibly high potential differences, connection between the substation and customer ground system is required whenever a substation neutral, conduit, control, metering, CT or other leads are run between the substation and the customer's facilities.
- 7.5 When required or if the customer desires to connect to SCE&G's substation ground system, SCE&G will provide two copper ground leads three feet outside the fence for the customer to make his connections.



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7.6 Customer fences, structures, or other metallic objects located near the substation shall be coordinated with SCE&G. The customer should be aware that any interconnection of the customer ground system to the SCE&G substation ground system requires special analysis, by the customer, to evaluate the impact of the grounding interconnection. For example, fences, structures, or other metallic objects located near the customer ground system should be evaluated to assure safe step and touch voltage potentials.

8.0 Transformer Neutral Resistor (if required by customer)

Standard service for any three phase, 4-wire, wye voltages provides that the transformer neutral be solidly grounded on the low-voltage side. The following conditions apply if the customer requires impedance-grounding to limit the maximum line-to-ground fault current. Resistance grounding is the most common method of impedance grounding. It is accomplished by connecting the transformer neutral to ground through one resistor. The additional equipment and responsible parties required for resistance grounding are shown below.

8.1 The neutral grounding resistor to be furnished and supplied by the customer.

The current rating, resistor value, and time rating of the resistor to be determined by the customer based on his requirements. The voltage and BIL ratings to be no smaller than the service voltage. The resistor frame, or housing, to be made of galvanized steel or aluminum so no rusting or maintenance will be required on the resistor.

8.2 An Instrument Current Transformer mounted on or in the resistor frame to be furnished and supplied by the customer. The voltage and BIL ratings to be no smaller than the service voltage. The primary current rating of the CT shall be between 50% and 100% of the current rating of the neutral resistor. For



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example, for a neutral resistor rated 400 amps, the CT ratio needs to have a 200/5 to 400/5 ratio.

8.3 A support structure to be supplied and furnished by the customer.

8.3.1 The resistor support insulators on top of the structure to be station post and the voltage and BIL ratings to be no smaller than the service voltage.

8.3.2 The structure to be designed to provide isolation from the foundation level of 10' - 0" to all energized parts for 25,000 volts and below.

8.3.3 The structure and resistor to be Seismic Zone 3 rated.

8.3.4 The structure to be hot dipped galvanized steel.

8.3.5 The structure to have two holes per leg for grounding. One hole located at the top and at the bottom of each leg. Holes to be 9/16" diameter.

8.3.6 If structure exceeds a foot print of 6' x 7' wide, notify proper SCE&G's representative.

8.4 The resistor, structure, and instrument CT will be mounted in SCE&G's substation next to the neutral bushing of the main power transformer.

8.5 The secondary of the instrument CT, located in the resistor, will go to a neutral overcurrent relay provided by SCE&G. The neutral overcurrent relay will be installed on the SCE&G transformer relay protection panel to provide backup protection against uncleared ground faults on the customer's system.

8.6 Materials to construct the foundation for the structure will be provided by SCE&G.

8.7 Miscellaneous conduit and wiring for the instrument CT's secondary current will be provided by SCE&G.

8.8 The wire to connect the resistor to the power transformer neutral bushing will be provided by SCE&G.

8.9 Labor to install all of the above items to be done by SCE&G.



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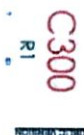
- 8.10** Items 8.1, 8.2, and 8.3 will be purchased and furnished by the customer and delivered to SCE&G construction personnel at the substation site for installation
- 8.11** In order to ensure the reliability of the SCE&G's transformer protection relay system, no customer device can be connected in the secondary circuit of the neutral instrument CT. If the customer wishes to monitor transformer neutral current for his own relaying, a second instrument current transformer must be furnished by the customer, mounted on the support structure (item 8.3), and its primary winding connected in series with the other instrument CT (item 8.2). The point of connection for the secondary that leads from this instrument CT will be in a Customer Interface Box.
- 8.12** The customer will provide SCE&G with copies of all manufacturers' drawings relative to Items 8.1, 8.2, and 8.3 early in the project so that foundations for the structure can be designed. These items will be indicated on the SCE&G construction drawings.
- 8.13** The resistor shall have an entrance bushing mounted on top, and an exit bushing mounted underneath the resistor. The entrance bushing voltage and BIL ratings to be no smaller than the service voltage.



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Redacted as CEII pursuant to FERC Regulations



PUBLIC VERSION

ATTACHMENT D

Schedule for Relocation of Existing 10.5 MVA Substation and Construction of new 10.5 MVA Substation

Estimated Construction Schedule - Trane Expansion

Requirements: Contract Execution, Signed Easement Agreements, and Final Site Plans

Sliding/Permitting for Sub Site, T-line, and Access Roads	Due Date	Status	Comments
Task	12/11/2017		
Permanent Easement Document and Exhibits Prepared			Completed by SCE&G.
Permanent Easement Signed and Electric Service Contract Executed	1/1/2018		Completed by Trane.
Corners of Substation surveyed by SCE&G and verified by Trane	1/9/2018		Completed by SCE&G and Trane.
Substation Site Prep Complete*	3/19/2018		Completed by Trane. This is in the critical path and cannot have any errors to SCE&G specification.
Substation Site Accepted*	3/29/2018		Completed by SCE&G.

115-12.8 kV Substation	Due Date	Status	Comments
Task	1/15/2018		
Major Equipment Ordered			
Structural Drawings Issued	4/1/2018		
Electrical Drawings Issued	4/15/2018		
Circuit Switcher Delivery Date*	7/15/2018		Transformer will be used from Spares. High side switch is the longest lead time item for this project.
New Substation Construction Complete*	8/31/2018		PDND estimates 6 - 8 months of sub construction when site prep is complete. However, this schedule gives 5 months.
Old Substation Decommissioned*	9/30/2018		PDND estimates 1 month to decommission old substation.

115 kV Transmission Line	Due Date	Status	Comments
Task	1/15/2018		
Pre-Design Meeting			
Pole PD Issued	2/15/2018		
Concrete Foundation Installation*	5/15/2018		Line outage required to install concrete foundations for the new transmission line structures.
Steel Pole Delivery	7/15/2018		
Transmission Line Construction Complete*	8/31/2018		Line outage required to energize new 115 kV tap and new substation.

Note:

This estimated construction schedule is non-binding and is subject to change in the sole discretion of the Company without notice to Customer

